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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,939	04/24/2001	Mototsugu Abe	09792909-4998	5606

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EXAMINER	
VENT, JAMIE J	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/840,939	ABE ET AL.	
	Examiner	Art Unit	
	Jamie Vent	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. ,See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-54* is/are pending in the application.

4a) Of the above claim(s) *2,23,24,31 and 52-54* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-22,25-30 and 32-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 April 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 27, 2005 has been entered.

Response to Arguments

Applicant's arguments filed April 27, 2005 have been fully considered but they are not persuasive.

On Page 12-15 applicant argues that Nafeh fails to teach, disclose, or fairly suggest the limitation of "characteristic extracting means for extracting characteristic data indicating the probability of the first signal part from the candidate part detected by the candidate-detecting means or from signal parts preceding and following the candidate part" as disclosed in independent claims 1 and 30. Nafeh discloses a system for classifying patterns of television programs and commercials based on discerning of the audio video of the data stream as discussed in Column 2 Lines 38-54 and seen in Figure 1a and thereby classifying the first signal part from the candidate part. It is further stated in Column 3 Lines 20-56 that the system extracts various characteristics from the inputting stream in order to classify the various segments of the AV stream. Furthermore, a detailed explanation of the probability of the extracted characteristic data and the detection of a commercial i is discussed in Column 5 Lines 64+ through Column 6 Lines 1-13 and thereby meeting the limitation. Although, applicant's points are understood the examiner can not agree and the rejection is maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3,4,5,6,7,8,9,10,11,12,13,14,15,18,19,22,25,26,27,28,29,30,32,33,34, 35,36,37,38,39,40,41,42,43,44,47,48, and 51are rejected under 35 U.S.C. 102(b) as being unpatentable by Nafeh (US 5,343,251).

[claims 1 & 30]

In regard to Claims 1 and 30, Nafeh discloses a signal-processing apparatus and method comprising:

- Candidate-detecting means for receiving an input signal (Figure 1a line 12) including at least the first signal part and remaining signal parts in time-divided fashion for detecting, from the input signal (Column 2 Lines 55-62 and Column 5 lines 41-42), a candidate part of the first signal part in accordance with characteristic patterns of the input signal at prescribed time intervals (Column 2 Lines 64-68 describes the classification of the signals coming into the system at predetermined timing);
- Characteristic-extracting means for extracting characteristic data indicating the probability of the first signal part from the candidate part detected by the candidate-detecting means or from signal parts preceding and following the candidate part (Column 6 Lines 6-12 describe the extracting of the data as well as the calculation of the probability of the output given the class of the input); and

- Detecting means for detecting the first signal part in accordance with the characteristic data extracted by the characteristic-extracting means (Column 6 Lines 25+ describes a detected program to be 1 while the candidate part/commercial is –1);
- Wherein the detecting means includes characteristic-evaluating means for evaluating the possibility that the candidate part is the first signal part on the basis of the characteristic data, and determining means for determining the first signal part from the result of evaluation performed by characteristic-evaluating (Figure 1a classifier 24 classifies the first part of the signal on the basis of classing of the characteristic data and thereby generates a control signal for further evaluation as described in Column 2 Lines 63+ through Column 3 Lines 20-25);
- Wherein the characteristic-evaluating means evaluates the possibility that the candidate part is the fist signal part, on the basis of the characteristic data derived from multiplying weighting values to the characteristic data and adding the weighted characteristic data (Column 6 Lines 5-40 describes the characteristic evaluating means to determining the first signal part based on the multiplying weighted values); and
- Wherein the characteristic-evaluating means uses a multi-layer perceptron to determine the possibility that candidate part of the first signal part (Figure 1d shows the multi-layer neural network wherein the characteristic-evaluation is determined and as described in Column 5 Lines 64-67).

[claims 3 &32]

In regard to Claims 3 and 32, Nafeh discloses a signal processing apparatus and method wherein the detecting means includes determining means for determining, from the characteristic data, that the candidate part of the first signal part is identical to the first part which has been designated (Column 2 Lines 65+ describe that once it is determined that the candidate part of the signal is classified a control signal is sent out for further determination of other signals if it identical as well as using the features indicated in Column 3 Lines 28-30).

[claims 4 & 33]

In regard to Claims 4 and 33, Nafeh discloses a signal processing apparatus and method comprising amplitude-detecting means for detecting an amplitude of the input signal wherein the candidate-detecting means detects a pattern that the amplitude of the input signal is smaller than a predetermined value at a predetermined time interval as one of the characteristic patterns (Column 3 Lines 34-36 "Changes in power or amplitude over the frequency spectrum between program and commercial segments" and further described in Column 3 60+).

[claims 5 & 34]

In regard to Claims 5 and 34, Nafeh discloses an apparatus and method comprising a change-detecting means for detecting a change of the input signal wherein the candidate-detecting means detects a pattern that the change of the input signal is greater than a predetermined value at a predetermined time intervals as one of the characteristic patterns (Column 3 Lines 40-42 describe detecting the change in pattern of the transmission at a value within the predetermined time intervals and further described in Column 5 Lines 30-37).

[claims 6 & 35]

In regard to Claims 6 and 35, Nafeh discloses an apparatus and method comprising uniform-component detecting means for detecting a unit period in which a prescribed component of the input signals fall within a prescribed range and detects a pattern that is prescribed component of

the input signal for the unit period at a predetermined time intervals is uniform as one of the characteristic patterns (Column 1 Lines 44-55 describe the patterns used for detection as well as the predetermined conditions/time that is used for the characteristic patterns).

[claims 7 & 36]

In regard to Claims 7 and 36, Nafeh discloses a method and apparatus wherein the characteristic-extracting means includes an amplitude-detecting means for detecting an amplitude of the input signal, and extracts the amplitude of the signal parts preceding and / or following the candidate as characteristic data indicating probability of the first signal part (Column 3 Lines 20+ describes the extraction of amplitude from the input signal to indicated if a commercial can be detected within the first signal part.)

[claims 8, 10, 11, 12, 22 37, 39, 40, 41 & 51]

In regard to Claims 8, 9, 10, 11, 12, 37, 38, 39, 40, and 41, Nafeh discloses a method and apparatus wherein the characteristic-extracting means includes an amplitude-detecting means for detecting an amplitude of the input signal and extracts the length of signal parts, correlation, mean, and frequency that the amplitudes of the signal parts preceding and/or following the candidate part are smaller than a predetermined threshold as characteristic data indicating probability of the first signal part (Column 3 Lines 60+ through Column 4 Lines 1-30 describes the detection of the amplitude and extraction of length and mean of the amplitude in the input signal and determination if the candidate part/commercial is within a predetermined condition which is accomplished through comparisons of the minimum, maximum, mean and the median of the amplitude.)

[claims 13 & 42]

In regard to Claims 13 and 42, Nafeh discloses a mode-detecting means for detecting a mode of the input signal that can have a plurality of modes, and extracts the mode of the candidate

part as characteristic data indicating probability of the first signal part (Column 5 lines 30+ describe detection of modes/features and the extraction of the candidate part/commercial from the characteristic data/input signal).

[claims 14 & 43]

In regard to Claims 14 and 43, Nafeh discloses a means for extracting existence of the first signal part in signal that precedes or follows the candidate part as characteristic data indicating probability of the first signal part (Figure 1A extracts the existence of the commercial while Column 5 Lines 30+ describe the classification process).

[claims 15 & 44]

In regard to Claims 15 and 44, Nafeh discloses a spectrum-detecting means for detecting a spectrum of the input signal, and extracts a change of the spectrum before or after the candidate part as characteristic data indicating probability of the first signal part (Column 3 lines 20+ describes all the possibilities for detecting the spectrum of the input signal).

[claims 18 & 47]

In regard to Claims 18 and 47, Nafeh discloses a means for identifying a source of the input signal and extracts a type of the source of the candidate part as characteristic data indicating probability of the first signal part (Figure 1A shows the possible input sources while the pre-processor/feature extraction 22 extracts the type of the source of the input data while determining the probability of the signal).

[claims 19 & 48]

In regard to Claims 19 and 48, Nafeh discloses an apparatus and method that comprises a timer for measuring time and the characteristic-extracting means extracts the time at which the candidate part is input as characteristic part is input as characteristic data indicating probability

of the first signal part (Column 1 Lines 25+ describe the use of timers to time the candidate part so thereby it wont be recorded onto a video recorder).

[claims 25, 26, 27, 28, 29]

In regard to Claims 25, 26, 27, 28, and 29, Nafeh discloses a signal processing apparatus comprising:

- Recording and / or reproducing the input signal (Figure 1F record mode)
- Editing the input signal (Figure 1F shows the editing process that can occur);
- Skipping the first signal part (Figure 1F shows the skipping mode);
- Extracting only the first signal part (Figure 1 element 22 extracts the first part of the signal); and
- Signal consists of an audio signal and/or a video signal (Figure 1 element 12) and the first signal part is commercial-message part (Figure 1A element 24 classifies if the first signal part is a commercial-message part).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 16, 20, 21, 45, 49, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nafeh (US 5,343,251) in view of Shah-Nazaroff et al (US 6,671,880).

[claims 16 & 45]

In regard to Claims 16 and 45, Nafeh discloses a means that extracts information but lacks the extraction of channel information of the input signal selected a channel from a plurality of channels as characteristic data indicating probability of the first signal part. Shah-Nazaroff teaches a system that identifies commercials as well as extract channel information and the likelihood/probability that that the characteristics are within that signal as seen in Figure 4. By extracting channel information it allows the system to determine

Therefore, it would be obvious to one skilled in the art at the time of the invention to modify the apparatus/method for classifying patterns of television programs and commercials, as disclosed by Nafeh, and incorporate a system that extracts channel information, as disclosed by Shah-Nazaroff et al, which allows for a better computation of the probability of commercials to be detected through certain channels and how to respond to the commercials.

[claims 20, 21, 49, & 50]

In regard to Claims 20, 21, 49, & 50, Nafeh discloses a means that extracts information from an input signal but lacks a genre-identifying means for identifying a genre of the input signal, and extracts the genres of the signal parts preceding and following the candidate part as characteristic data indicating probability of the first signal part. Shah-Nazaroff et al discloses extraction of characteristic, such as genres, in order to determine user characteristics which in turn allows for the probability a certain commercial within that type of program (Column 4 Lines 12+).

Therefore, it would be obvious to one skilled in the art at the time of the invention to incorporate the extracting information from the input signal, as disclosed by Nafeh, and incorporate a further extraction means as determining specific genres of the programs and commercials, as disclosed by Shah-Nazaroff et al, in order for classification and identifying specific genres associated with the candidate and characteristic data parts of the signal.

[claims 17 & 46]

In regard to Claims 17 and 46, Nafeh discloses a means that extracts information from an input signal but lacks the extraction of an area code of the input signal that can have any one of different area codes as characteristic data indicating probability of the first signal part. Kawara et al discloses a reproducing system that programs information according to area codes that specify a certain area thereby indicating the characteristic data for that particular area as seen in Figure 4. This allows for special programming to occur in various countries due to the recognition of these countries by the area codes.

Therefore, it would be obvious to one skilled in the art at the time of the invention to incorporate the extraction of information, as disclosed by Nafeh, and incorporate a system that takes an input signal that has various area codes that will identify the input signal according to the said area codes, as disclosed by Kawara et al, by incorporating this feature would allow for further identification, classification, and evaluation of the input signal

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Picco et al (US 6029045);
- Hite et al (US 6002393)
- Hunt et al (US 6128712);
- Kawara et al (US 6278836).

Contact Fax Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamie Vent whose telephone number is 571-272-7384. The examiner can normally be reached on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Groody can be reached on 571-272-7950. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jamie Vent
06/16/05